

We claim:

1. A process for producing a flexographic printing plate comprising the steps of image-wise exposing a photosensitive resin composition on a substrate such that exposed areas of the photosensitive resin composition are crosslinked, then selectively washing away unexposed non-crosslinked areas of the photosensitive resin composition with a developing solution to form a relief pattern of the crosslinked areas of the photosensitive resin composition on the substrate, and drying the flexographic relief printing plate to remove the residual developing solution, wherein said developing solution comprises diisopropylbenzene.
2. The process of claim 1, wherein said developer further comprises a co-solvent.
3. The process of claim 2 wherein said co-solvent is selected from the group consisting of tetrahydrofurfuryl alcohol, 2-ethoxyethanol, terpineol, cyclohexanol, methyl cyclohexanol, hexyl alcohol, heptyl alcohol, dipropylene glycol methyl ether, 2-butoxyethanol, 2-(2-butoxyethoxy) ethanol, naphthenic hydrocarbons, paraffinic hydrocarbons, olefinic hydrocarbons, isoparaffinic hydrocarbons, terpenes and mixtures thereof.
4. The process of claim 1, further including the step of reclaiming said developing solution after said washing step by removing impurities from said developing solution such that said developing solution can be re-used.

5. The process of claim 4, where said reclaiming step is carried out by distillation.
6. The process of claim 5, wherein said developer is azeotropic.
7. The process of claim 2 wherein the co-solvent is tetrahydrofurfuryl alcohol.
8. The process of claim 2 wherein the co-solvent is a terpene solvent.
9. The process for claim 2, wherein said developing solution comprises up to about 80 wt% of said co-solvent.
10. The process of claim 1, wherein said developing solution consists essentially of diisopropylbenzene.
11. An azeotropic photopolymer developing solution comprising diisopropylbenzene and a co-solvent, characterized in that said solution selectively removes non-crosslinked polymer from a substrate without removing crosslinked polymer.
12. The azeotropic photopolymer developing solution of claim 11 comprising from about 80 wt% to about 20 wt% diisopropylbenzene in combination with from about 20 wt% to about 80 wt% of said co-solvent.

13. The azeotropic photopolymer developing solution of claim 11, wherein said co-solvent is selected from the group consisting of tetrahydrofurfuryl alcohol, 2-ethoxyethanol, terpineol, cyclohexanol, methyl cyclohexanol, hexyl alcohol, heptyl alcohol, dipropylene glycol methyl ether, 2-butoxyethanol, 2-(2-butoxyethoxy) ethanol, naphthenic hydrocarbons, paraffinic hydrocarbons, olefinic hydrocarbons, isoparaffinic hydrocarbons, terpenes and mixtures thereof.

14. The azeotropic photopolymer developing solution of claim 11, where said photopolymer developing solution produces less than 4% swelling in a crosslinked photopolymer after exposure to said photopolymer developing solution for a period of time sufficient to develop the substrate.

15. The azeotropic photopolymer developing solution of claim 11, where said photopolymer developing solution produces less than 4% weight gain in a crosslinked photopolymer after exposure to said photopolymer developing solution for a period of time sufficient to develop the substrate.

16. The azeotropic photopolymer developing solution of claim 11, where the boiling point of said photopolymer developing solution is lower than the individual boiling points of said diisopropylbenzene and said co-solvent.